

## **Historic, Archive Document**

Do not assume content reflects current scientific knowledge, policies, or practices.



ROSES

1. MABEL MORRISON 2. BARONESS ROTHSCHILD





---

AUGUST, 1885.

---

THE MOST INDIFFERENT observer of the fruit markets cannot have failed to notice the increasing supply of tropical fruits, especially Oranges and Bananas. These fruits are now so plentiful and so cheap that they are eaten freely by all classes of the community, and the increased consumption apparently induces a greater supply. Inasmuch as the capacity of tropical countries for the production of these and other fruits is practically unlimited, we may expect the supply to increase until a selling price is reached which is so low that the culture of them will no longer be remunerative. The annual yield of Oranges in Florida is constantly increasing and must naturally be expected to be greater for many years to come, even if no more new Orange groves should be planted. The supply of tropical fruits from the West Indies, particularly from Cuba and Jamaica is rapidly increasing, and, besides, Central America is sending its annually enlarging crops to our shores. Thus, if the quantity sent from Spain and the Mediterranean islands should remain stationary, or even be entirely stopped, we should still receive an abundance. With a greatly increased supply of Oranges and Lemons from the tropical sources mentioned, and consequently decreased prices, it is not improbable that the European supply will be at least checked, if

not entirely diverted into other channels, as the cost of carriage from the tropics is, or will be, in favor of that region. The government statistics of the fruit shipments of Jamaica show that in the last ten years the quantity of Oranges sent from that island to this country has increased ten-fold, of Bananas nearly thirty-two times as much, and of Pine Apples more than thirty-six times as much. Oranges begin to come in in December, and this year the supply has been plentiful until July. The quality of the fruit is not so good after the middle of April, but it is pushed forward into the markets in great quantity.

In seasons when our Apple crop is short, Oranges are especially welcome, and at all times the large supply invites a free use of them. During the past spring and up to the present time, Bananas and Pine Apples have been unusually plentiful and good, and cheaper than ever before.

To what extent, if at all, the use of these fruits has lowered the price of Apples and Strawberries cannot be determined, but that it has had this effect cannot well be doubted. If the supply of tropical fruit should continue to increase in the next ten years as it has in the last ten, far exceeding the ratio of increase of population, the consumption of our northern fruits must be essentially less-



sened, or, as the only alternative, the diet of our people must consist of fruits to a far greater extent than heretofore. That a diet composed much more largely of fruit than is now common would be conducive to health, especially during the warmer months, most physiologists would probably admit, and we may reasonably expect that this result will follow an increased and constant supply of good fruit. But making all proper allowances for the *per capita* increase in the use of fruits, the northern fruit grower is forced to face the question of a lessened demand for his products by the competition of southern fruits.

The Strawberry can be raised quite as well in this region, and farther north, as it can be in a lower latitude, and yet we find the greatest Strawberry growers of this country are in Virginia, Southern Ohio, Kentucky, Southern Indiana, Southern Illinois, and Missouri, and Arkansas is opening a new field. The advance of two or three weeks in time by a southern location is an advantage that more than compensates for the increased expense of longer carriage. The rapid transit given to fruit cars and their improved construction enables the southern fruit grower to put his products, even so perishable a one as the Strawberry, into the northern markets in nearly or quite as good condition as those that are sent but a few miles. It is improbable that the cultivation of the Strawberry will ever develop so largely in the New England States, New York, Northern Ohio, Michigan, and the Northern parts of the Western States as in a more southern region. Delaware, Maryland, Virginia, the Ohio Valley, Missouri and Arkansas form a belt of country which is, and will continue to be, the great Strawberry producing territory. Our northern Strawberry growers must work on a more limited scale, and must place in the market handsome, good fruit, of medium size. To make this point more evident we will glance at the prices of Strawberries in this market the present season. From the 23d of May to the 16th of June southern grown berries ranged in price from twenty cents to ten cents, two days during that time the market was crowded and the price fell to eight cents. Making the best average we can from all the facts and figures in our possession, it ap-

pears that the average price received by the wholesale dealer in this market, for southern grown berries, was nearly fourteen cents. The profit of the wholesale dealer, and the commission of the jobber, and the freight are to be deducted from this sum to find what remains for the grower—probably about ten cents. We understand that some southern growers stop shipping when their returns fall below ten or twelve cents a box.

Our northern Strawberry growers would be well satisfied with a showing like the above. Our inquiries show that sixteen cents was the most that our local growers received, and that only for a day or two. The market gradually dropped as their supplies came in, until it reached three cents a box, and finally fell to one cent for a single day, without buyers enough to take what was offered. The great bulk of the berries have been retailed at five cents a box, and the highest average that can be estimated for this season's local crop in this market is about five cents. Deducting cost of marketing, cost of packages and picking, and what is left is a sorry compensation for the grower's labor and expense. A large proportion of both the southern and local grown berries was the Wilson, and it is regarded as highly as any other variety, with the exception of well grown Sharpless, brought in in fine condition. Even the Sharpless samples have retailed as low as five cents.

Berries of a good medium size or a little over, not the largest, brought but a short distance would easily command double the price of smaller berries or those that had lost something in appearance by handling and carriage. Apparently the only profit that awaits our northern Strawberry growers is what will come from very superior fruit, sent short distances and carefully handled.

In raising Raspberries and Blackberries in this latitude there is little to fear from southern competition. The same is true in regard to Currants and Gooseberries. The Plum is a fruit which with proper treatment may be profitably raised in many parts of the north.

The important question which our northern fruit growers have now to decide is in regard to the Apple. Can it be raised with profit? We cannot, at present, examine the question in detail, but it may be said that the planting of Apple



orchards has greatly fallen off for a few years past; many have been neglected and left a prey to insects, mainly for the reason, perhaps, that some seasons of unfortunate weather have prevailed for awhile, and left us without a crop until last year; and for the same cause some have even cut down their orchards. This

course is wrong, and a few years more will make it plain. We shall always need the Apple in abundance; no other fruit can wholly take its place. With the present low rate of orchard planting the demand for good Apples will soon exceed the supply, no matter what other fruits are in the market.

---

### LEMOINE'S LILAC.

We present to our readers, on this page, an engraving of a new variety of Lilac, the drawing of which was made from a specimen which bloomed this

constitute its peculiarity. Strong plants produce large, pyramidal branched spikes of flowers, which are like little rosettes, much the same as the double Bouvardias.



spring on the grounds of Mr. JOHN CHARLTON, of this place. The drawing is made only half natural size, with the exception of the small panicle above at the left, which shows the full-sized flowers. The double flowers of this variety. The buds, before opening, are rose-

colored, and the fully expanded flowers of a soft lilac shade. These double flowers when cut last a much longer time than single ones, and in this lies its superiority. In England and France it has been employed for forcing, and has been found admirably adapted to the



purpose, and in that state the flowers are a pure white; they are very useful for cutting for bouquets and for many kinds of decoration. The plant takes its name from its raiser, LEMOINE, of France.

This shrub will prove an interesting

one growing with other varieties of the Lilac. Too little is known by the public generally of the qualities of the many beautiful kinds of Lilac now in cultivation, and far greater attention should be given to them than they now receive.

### HANDSOME HYBRID ROSES.

Among the many beautiful Hybrid Perpetual Roses, one which has played a conspicuous part for the last eighteen years is Baroness Rothschild, represented in our colored plate this month with one of its progeny, Mabel Morrison. Baroness Rothschild was raised in France, in 1867. It is a large, full and well made flower, cupped form, and usually very symmetrical. Our artist selected for representation a specimen with three centers, a form sometimes seen in this as in other varieties of Roses. The color is a soft rose, or light pink. It is a free bloomer, a vigorous grower, and one of the hardiest of the Perpetuals. It is an excellent autumn bloomer, and is highly prized as an exhibition variety. Its one lack is a deficiency of odor. The foliage of this flower stands up close around it, giving it a fine setting. The fine form and color, and the other good qualities of this variety should secure it a place in every good collection of hardy Roses. Baroness Rothschild is distinguished by the number of other fine sorts it has given rise to as sports. One of these, as already mentioned, is the white variety shown in the colored plate.

Mabel Morrison has the characteristics of growth and constitution of its parent, varying only by its color. It is one of the most desirable of the white, or so called white, Hybrid Perpetuals. The flowers

are beautiful in form, semi-double, cup-shaped, usually a creamy white on first expanding, and then changing to a delicately tinted shade of rose, and in either aspect admirable in the highest degree. In the close setting of the foliage around the flower, Mabel Morrison even surpasses its parent, and this habit is an attraction of great value. It originated in England in 1878, and has not yet become known as widely as it deserves; one cause of this is probably because it does not grow freely from cuttings, and many professional rose-growers in this country propagate in no other way. Some, however, increase it, as well as several other varieties, by budding on strong-growing stocks, and in this way it makes a very satisfactory plant, if properly cared for.

In 1882 another sport from Baroness Rothschild produced another white-flowered variety, differing from Mabel Morrison in being quite full, equal in this respect to its parent, as also in other habits, and in vigor of growth. In color it is a pure white. This variety is known as White Baroness, and is yet rare, and has not been thoroughly tried.

Besides the above, a deep rose-colored variety, of cupped form, was raised from Baroness Rothschild in 1876, known as Marie Louise Pernet; and in 1881 another deep rose-colored variety, named Mademoiselle Marie Chauvet.





## CORRESPONDENCE.

### WINTER SUPPLY OF VIOLETS AND PANSIES.—PRIZE ESSAY.

How can amateurs without greenhouses keep up a winter supply of Violets and Pansies?

To grow Violets in winter outside of a greenhouse, is considered by practical gardeners one of the easiest things to perform. Many florists keep them in cold-frames exclusively, for, as a rule, they have not room for them in their greenhouses, unless a house is built on purpose for them. They may be grown in pots, as window plants, provided plenty of air can be given on sunny days, and a steady temperature between 35° and 55° can be kept up. If kept in too high an artificial temperature they will not flower much, but will make up in red spider what they lack in blossom. A Geranium, a Carnation and a Monthly Rose may be wintered and flowered at a low temperature, if plenty of sunlight prevails. An occasional little frost will not hurt the Geranium; the Carnation can bear considerable frost, and the Rose is the hardiest of them all. Yet all these three named plants will do admirably in an average temperature of 60°. With the Violet it is different, and it wants to be kept cool at all times, if it is expected that it will fulfill its mission. All this does not imply that the temperature of a Violet house or frame should never be allowed to run up to 60°, because sometimes the heat in the day time is not always under control. The sun may sometimes make the atmosphere under glass warmer than the gardener would like to have it, but to raise the sash only one inch would let the frost in and do more damage than the heat. In such a case a little too high temperature is the lesser evil of the two.

A good place to grow Violets may be constructed at the south side of a dwelling. Dig a pit two feet deep along the house. Into this put a stout frame to receive common hot-bed sash, the sash to lean against the building. Tear down the wall that separates the frame from the cellar under the house, and put a row

of windows in its place. The idea of this is, that the natural heat in the cellar shall keep your Violet frame at a steady temperature. At the same time you can work over your flowers, no matter what the outside weather may be, and when no air can be given directly outside, it may be done indirectly inside. When the outside sash is open, the inside may be shut. Thus the sun will warm up the cellar, and perhaps store a little heat for the night. Is your cellar already warmed up by a furnace? If it is, then I am sorry, but even in that case, we can regulate the temperature by having the inside sash open but a little; or, perhaps, the furnace heat will save the trouble of covering up nights. Keep your eye on the thermometer, and by a little watching you will soon learn what to do. I said dig a pit two feet deep. This must be filled in again to the depth of one foot with some good garden loam, well composted with stable manure, well rotted, thus making the Violet bed about one foot lower than the surface of the ground outside. There are, however, houses where a frame like the one described would be an architectural impossibility, or the owner might object to having his house disfigured in such a manner. In such cases we must resort to the common cold-frame. A simple frame, made of heavy plank, settled in the ground, covered with hot-bed sash and protected with straw mats and shutters, will keep Violets well. There is, however, a great drawback to such frames, and that is, that there may be times when you would like to pick a bunch of flowers out of them, but cannot get at them on account of too cold weather. There may be plenty of them there, they smile at you, or perhaps mock you through the glass, but to raise the sash for only two minutes would soon set their smiles to rest, and yours as well, for that matter.

I will here describe a frame that will not only remove these obstacles, but at the same time be perfectly safe from



frost, which is not always the case with the common cold-frame, not even with the heaviest covering. Select a space with a southern exposure, and dig a pit six feet deep. It may be deeper, or not quite so deep, according to locality. I choose six feet because it is a convenient depth to walk upright in. The length and width must be governed by the size and number of your sash, but as the size commonly used is three feet by six, we will take that as our standard. This would make our pit a little less than six feet wide, making allowance for the pitch of the sash. Board up this pit inside, to keep the earth from caving. The boarding will terminate in the frame to take the sash. Inside of this structure build a table three and one-half feet wide, such as you see in most greenhouses, and two and one-half feet from the glass at its highest point. I allow one foot slant for a six-foot sash. You will find a bench three and one-half feet wide about as wide as you care to reach across. It leaves a space over two feet in width for a walk. A still better plan would be to make the bench six inches narrower, and leaving that space behind for the air to circulate through.

But how are you going to get into it? To do that you must sacrifice the space of one sash, or rather make your pit and frame about three feet longer than you have sash to put on. This space must be partitioned off from the rest of the pit and a door put in opposite the walk. Next, put in some stairs and cover the whole tightly with heavy boards, leaving a hole for a trap-door, just large enough to let you through conveniently. You may call this part an entry, ante-room, hall-way, vestibule, or anything you please. Once inside this structure, the world is shut off from you; you are separated from its distinctions and its cares. Left alone, with your flowers over your head, the winds may roar and the snowflakes may fall, you will mind them not, for you are in a world entirely your own. But I am going too fast, for as yet our frame has nothing to show but bare boards.

The principle on which a pit like this works is, that it is dug out far beyond the frost line. The heat radiating from this large surface of unfrozen earth is sufficient to keep Jack Frost at bay, and

that is all the heat a Violet or Pansy requires to live and thrive.

In localities where there is much zero weather it would be well to remove the earth around the frame to the depth of two feet, and about three feet wide. This cavity to be filled with leaves, litter and fresh horse manure well trodden down. In any case the glass must be covered in severe nights with straw-mats or shutters, or both. And now let us take up the more pleasant topic: The cultivation of the Violet.

The varieties mostly cultivated for winter flowering are the Neapolitan, a light blue, double one, and Marie Louise, a dark blue and also double. Both are varieties of the so-called English Violet, *Viola odorata*. They are propagated by cuttings, or by dividing the old plants. The latter is the better method for amateurs. The best time to do this is the month of April, when the old plants are through flowering, and as soon as the ground is in good working order, so that the divided plants can be set out in the open ground at once, where they are to remain during summer. This must be repeated every spring. Select only the best and throw the rest away or give to some friend, it will not do to set out the whole clumps of old plants. During the hot months of summer they will not grow much, they are children of a temperate climate. It is well to give them some protection. Some let weeds grow over them for the sake of shade, but to let weeds grow is against the true principles of gardening, and if Violets do better under the protection of other plants, why not mix them with cultivated ones? I plant mine in the same rows with Carnations that are intended for winter-flowering, planting a Violet and Carnation alternately. Nothing needs to be done to them during summer, besides weeding and cutting off the runners, until they are to be removed to winter quarters.

In about the month of September prepare the bed that is to receive your Violets. If a solid bed, as in the frame first described, the soil should be from ten inches to a foot deep; if a raised bench, five or six inches will be sufficient. The soil must be rich, and, if possible, of a nature to retain moisture. After the bed is prepared plant the Violets in rows



across the bench. The rows to be a foot apart and as many plants in the row as you can get in without crowding them too much. Water them well with a sprinkler to settle the earth around the roots, and give them partial shade, but no glass yet. When the plants show signs of growth, gradually remove the shade and give them a thorough soaking with soapsuds warm from the wash-tub. Put on the glass when frost threatens. Ventilate whenever the weather permits, and on very mild days remove the glass entirely, or at least every other sash. Keep them free from weeds, cut off all runners and carefully remove all mouldy and rotten leaves. Water freely whenever the surface of the soil shows indications of dryness, but without wetting the foliage. To bring the flowers to the greatest perfection there is nothing better than soapsuds applied about once a month. But never do any kind of watering unless the ground asks for it by the dry appearance

of its surface. I have allowed my Violets to go for two months without water.

Pansies require about the same winter treatment as Violets, only give them the sunniest place in the frame. Sow your seeds in the beginning of August, in a cool situation. Sow plenty of it, because the plants will not all be good for winter flowering. When the young seedlings are large enough to be handled, prick them out in a prepared border of good rich soil, about four inches apart, and keep them well watered. In the first week of October they should have fairly begun to flower. Select only the best for winter blooming, and do not plant any in your frame that has not shown at least one flower, for after the first flower more are sure to follow. After having your bed planted to your own satisfaction, give it all the care you can after the rules above given, and an abundance of flowers will be your reward.—CHAS. EVERDING, *Branford, Conn.*

### A WELL KEPT GARDEN.

In my wanderings about the country I occasionally meet with a garden, generally of small size, which irresistably impels me to seek out the gardener, and ask his aid to find the secret of his successful management. I almost invariably find he is either Scotch or English, and that he has an employer who is in full sympathy with his work. Such a place is that owned by W. F. COCHRANE, Esq., of Yonkers. In a vicinity studded with gardens having much pretension, this comparatively small place is, perhaps, the most attractive of any when seen from the road by the traveler. The house stands well back from Broadway, and has a beautifully kept expanse of open lawn between it and the road. The margin of this lawn has been fringed by clumps and belts of trees, and along the roads are flower beds of various shapes, some of them planted as carpet beds, others with mixed foliage, others again with a combination of flowers and foliage.

A large carpet bed near the gate has a star as a center, with a crescent at either end; the star is solid with golden *Alternanthera*, edged with *Echeverias* and dwarf *Pilea*; the crescents are worked out similarly with the two latter plants,

and the resulting spaces filled with three species of *Alternanthera*.

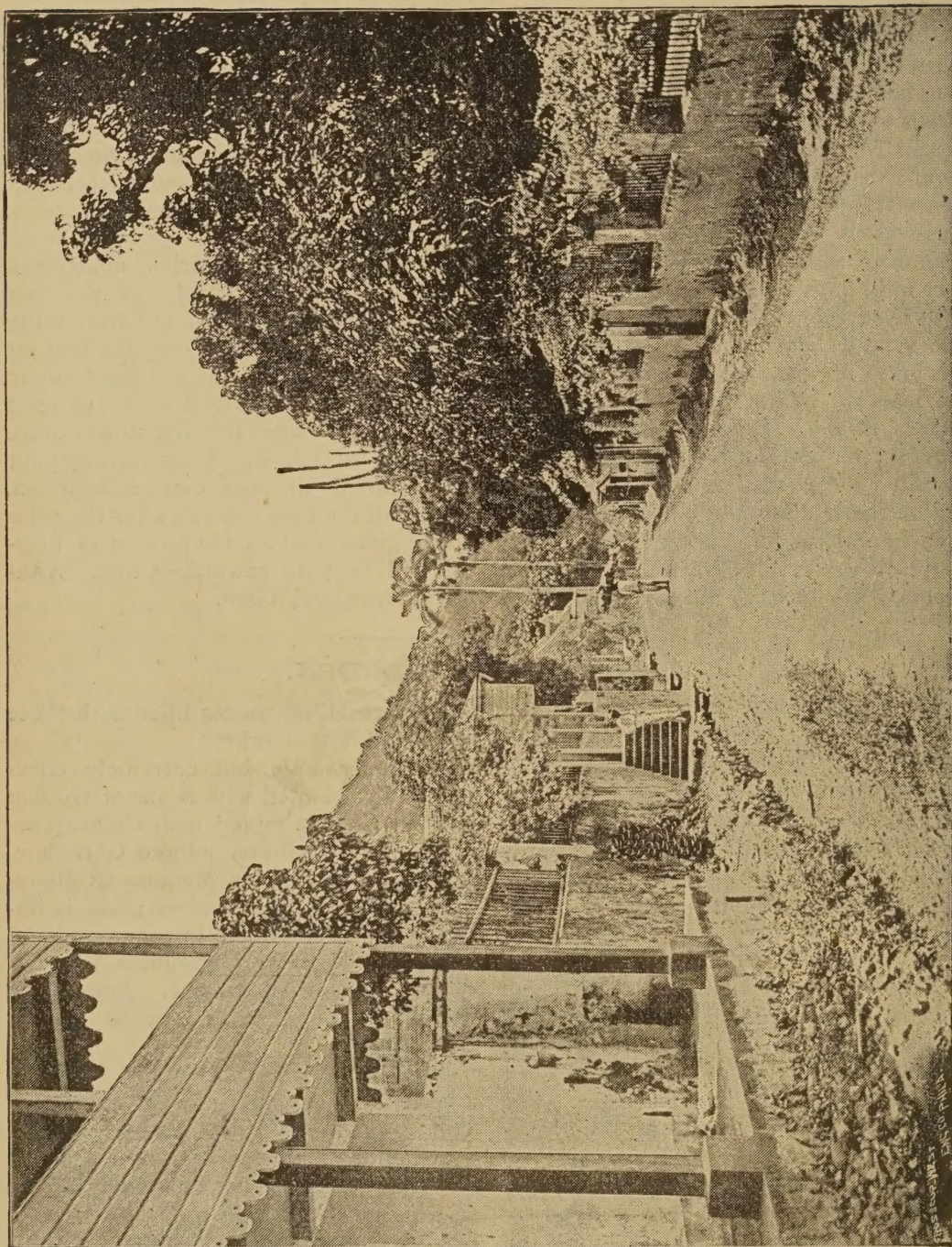
Another simple but extremely effective bed is planted with a star of Golden Bedder *Coleus*, edged with *Coleus Verschaffeltii*. A salmon-colored *Geranium*, known in Europe as *Madame Ruthersdolf*, is very effective, indeed; this is immediately surrounded in one case by Mountain of Snow *Geraniums*, with an outside edging of *Iresine*. Summit of Perfection is a good double scarlet *Geranium*.

Immediately in front of the house is a large bed in which a great number of *Coleus* plants have been quite successfully handled. The center is a salmon-flowered *Geranium*, surrounded by Mountain of Snow, then follow lines of *Iresine*, *Coleus Verschaffeltii*, Golden Bedder *Coleus*, *Perilla* and *Geranium*, and *Lobelia speciosa*.

Altogether, this pretty place, with its charming Hudson River scenery, its lawns, its bedding and its perfect keeping, is a roadside gem of the first water, reflecting credit on the taste of its owner, and praise upon the gardener, Mr. MAC DONALD. Let me say in conclusion that the children have quite a respectable garden to themselves.—J. MACPHERSON.



VICK'S ILLUSTRATED MAGAZINE.  
IN THE WEST INDIES.



ROAD SCENE IN MARTINIQUE.

Since writing from Barbadoes, sickness in the family caused a modification of our plans, and a visit to Martinique had to be abandoned. After spending two months in Barbadoes we took the steamer for Antigua, this time spending three days along the western shore of St. Lucia, taking in sugar at a number of little ports, and thus getting an opportunity

for enjoying more thoroughly the magnificent scenery of this beautiful island. Amongst our stopping places was the little port of Souffriere, close to the base of the *Pitons*, the grand pair of mountains springing with precipitous cliffs from the water's edge, referred to in my previous letter, and the quaint, sleepy old town of Vieux Fort, at the southern extremity



of the island, once its capital when the island was in possession of the French.

Stopping a few hours at Martinique, and regretting very much our inability to spend as many weeks in this Queen of the French West Indies, and making also a short stop at Dominica, we passed on by way of Montserrat to Antigua, where we spent over a month very pleasantly.

boating, with the numerous deeply indented bays and small islets fringing the coast—wanting in all the other islands of this group—fine bathing though wanting in good facilities, a good reading room and library well supplied with foreign and insular newspapers and magazines, very agreeable society and a hospitable people. Several varieties of beautiful living coral can be obtained by wading



VIEW IN BOTANICAL GARDEN, ST. PIERRE, MARTINIQUE.

St. Johns, Antigua, is the seat of government for the Leeward Islands, and to one wishing to spend a winter in the tropics, I can heartily recommend it for at least a part of their sojourn. The island lacks the wild scenery and profuse tropical vegetation of Dominica, Martinique, and some of the smaller isles, but it is drier and cooler than any of them, cooler also than Barbadoes, and one of the most healthy. It has capital roads for driving, splendid opportunities for

in water less than knee deep. To those willing to put up with plain accommodations and simple, but well-cooked food—all that can be obtained at present in any of these islands—a visit to this quiet little island will be one of solid enjoyment.

Near enough to its cane fields to be plainly visible, is the mountainous island of Montserrat; although but twelve miles long it has three mountain peaks, one of them over three thousand feet high, and has consequently a moister climate and



much more luxuriant vegetation than Antigua. The Bishop of the Leeward Islands told me that he had ridden on a road in Montserrat, bordered on both sides for over a quarter of a mile with fields of one of the most beautiful species of the Golden Fern. The island is well worth a short visit.

But for magnificent scenery and profuse wild tropical vegetation, reaching to the tops of its mountain peaks, over five thousand feet in height, this island of Dominica, where we now are, surpasses all the Caribbees. One, however,

down roots from its branches, which, on reaching the ground, nourish additional stems, thus converting one tree into a small grove. I send you a photograph, giving a very good representation of the Barbadoes species.

The Bougainvillea, with its masses of rich bloom, is seen in Barbadoes in two shades of color. But one of the most striking floral objects, which, at a distance, I thought was a Bougainvillea, from its similar bright magenta color—the form of flower proving to be quite different—was a species of Bignonia, a vine

which covered large trees with a solid mass of flowers, having the striking peculiarity of coming out all together, and disappearing in the same manner. For a few days a tree would be covered with bright flowers, then they would all seem to fade together, and in a few days more there would not be a flower left; after the lapse of a week or two the vine would again burst into full bloom.

The roadsides of Barbadoes were in places studded with a beautiful little species of the Lo-

belia, with a long tube and five white petals, (*Lobelia grandiflora*?) A species of *Convolvulus*, called in Barbadoes the Noyeau vine—probably *Convolvulus dissectus*—I found growing wild; it has very pretty leaves with four or five deeply indented lobes, which, when crushed, give a strong odor of Bitter Almonds—hydrocyanic acid.

Amongst the peculiar trees and plants noticed in Barbadoes, and most of which we have seen in other islands also, the following may be mentioned: The *Acacia latisiliqua*, a tree which bears its seeds in pods six or eight inches long, that grow in clusters, hanging on the tree for weeks after they are dry and ripe, and which make quite a loud rustling noise as the wind blows through them, giving the tree the popular name of the "women's tongues," because, as a negress told us, "they make so much noise."

The *Casuarina*, a singular tree, very



BEARDED FIG TREE—*FICUS LAURIFOLIA*, BARBADOES.

must be used to horse-back exercise over rough trails, or have a good sturdy pair of legs of his own, to be able to get about and see anything, for these are the only possible modes of locomotion; and he must remember that to produce this luxuriance of vegetation a hot, moist climate is needed, and a hot, moist climate he will find, tempered, however, as regards heat, as the mountains are ascended. At this time of the year, April, at Roseau, the capital, the temperature apparently does not fall much below 78°; the nights are not uncomfortable, but the days are frequently oppressive even at this, the driest season of the year.

Before speaking more of Dominica, however, I will say a few words about some trees and plants which were singular, to us at least, which we noted in other islands. I referred, in my last letter, to the Bearded Fig tree, which, like its East Indian cousin, the Banyan, sends



pretty as a shrub, but rather inclined to a straggling growth as it reaches the proportions of a tree; *The Treasury of Botany* well says of these trees that "they have the appearance of gigantic Horse Tails, Equisetaceæ, being trees with thread-like, jointed, furrowed, pendent branches without leaves, but with small toothed sheaths at the joints." It bears a very small, pretty cone, and is remarkable from the volume of sound which the wind will produce blowing through its branches; a single small branch held in a light breeze recalls at once the familiar "soughing of the Pines."

The Dumb Cane, called by KINGSLEY an Arum, *A. Dieffenbachia*, and by SCHONBURGH the *Caladium seguinum*; it gets its popular name from the mouth swelling if a few drops of the poisonous juice are put in it, so as to render it impossible to speak for several days thereafter. In the old slave days cruel masters used to punish refractory slaves by putting the juice in their mouths, causing swelling, choking and intense agony for several days thereafter.

The poisonous qualities of the Manchineel we found to be much exaggerated, it being not unusual to find handsome specimens of the tree in gardens and private grounds.

Before leaving Barbadoes we visited, at the invitation of Sir GRAHAM BRIGGS, his country seat of Farley Hill, some eight hundred feet above the ocean, with magnificent views of the only mountainous district, and with the ocean in sight to the north, east and west, it is one of the most delightful places on the island. Here originated the beautiful hybrid Fern, *Adiantum Farleyense*, from a species of the Maidenhair Fern.

In Antigua we found in the wildest part of the island, a Fern that is quite fragrant.

In all these islands, especially in Dominica, the *Stephanotis*, with its large, handsome, white flowers, deliciously fragrant, grows, as might be expected, rapidly and flowers abundantly. Large clusters of the flowers are freely given away.

Here, in Dominica, the home of the Fern, there are at least three species of Tree Fern, three Gold Ferns, at least two Silver Ferns, and a number of filmy, semi-transparent ones which are very beautiful.

I was surprised to find, besides the

Bread Fruit tree, the fruit of which proves to be quite palatable, a Bread Nut tree, which closely resembles the other species both in its foliage and external appearance of its fruit; but which has in the husk of the latter a dozen or more nuts that, roasted, resemble in flavor our Chestnuts.

The Cashew nut, the fruit of the *Anacardium occidentale*, is very curious from the appearance of the nut or seed growing outside the fruit—more properly speaking, "the kidney-shaped fruit grows at the end of the thickened fleshy, pear-like receptacle." The latter, however, makes a very good preserve, and the nut, or fruit proper, which when raw contains a very acrid oil, when roasted is quite good eating, suggesting our Peanut, but of a much more delicate flavor.

There is a species of Cocconut indigenous to this island, that I never saw or heard of before, the usual one of commerce not originating in any part of America. The tree is smaller and the trunk much slimmer than the ordinary Cocoa Palm, but much resembles it in appearance. The nut also closely resembles the ordinary Cocconut internally and externally, except that it is very small and is pointed at one end.

We find the Cabbage from the Cabbage Palm quite palatable, and the Crapaud, a species of toad of immense size, is considered quite a delicacy. It is good fricaseed, and also makes a savory soup, the body as well as the legs being eaten.

In a short article like this, I can give but a very imperfect idea of the wonders and beauties of Dominica—its picturesque mountains pierced with deep and fruitful valleys, its marvelous wealth of vegetation, and its wonderful boiling lake nestled in the midst of the highest mountain peaks.

I have made several excursions in different directions, and one of the most enjoyable from the beauty of its scenery and vegetation was a ride across the island to a sugar estate on the opposite side. Our road at first lay along the sea shore, giving us views up a series of lovely valleys, till, at last, crossing a streamlet we commenced following it up its course, first near its banks and afterwards by a zig-zag trail up the mountain side to the summit of the pass, where we had a magnificent view of the



valley at our feet, with a background of mountains upon mountains, and in the distance the little town of Roseau, from which we had started, and of the broad Caribbean Sea beyond. On the way up we passed quantities of *Thunbergia* in bloom by the roadside, and fields dotted with a large red *Amaryllis* with a white throat. And as we ascended farther, the beautiful Tree Fern, with its crown of lace-like fronds, made its appearance. But it was not till we passed the summit, and commenced descending the valley on the windward side that we saw the Ferns in all their luxuriance. Here the path wound along the mountain side, with a cliff on one hand, covered with a profusion of various species of Ferns; on the other, a chasm filled with dense vegetation—trees with trunks studded with Ferns and Epiphytes, clumps of tall and graceful Bamboos, whole acres of the opposite hillside covered with Tree Ferns, and amidst it all resounding the beautiful flute-like notes of the Mountain Whistler, a little bird much easier to hear than to see. Many of the Tree Ferns we passed were thirty to forty feet in height. Mr. L. told me that he measured one after it had been cut down, whose trunk was forty-five feet in length. To get the full effect of their beauty one must get under a tall one where he can have the delicate fronds well outlined against the blue sky.

We were hospitably welcomed at a planter's house near the sea shore, and, provided with fresh horses, we made a tour through the estate, gathering some fine Silver-leaved and other beautiful Ferns, and a handsome and richly scented white-

flowered Orchid, passing in our tour through an avenue of tall and stately Cabbage Palms, thirty-five on each side, which formerly led up to an old manor house. At the house of our host we saw another Orchid with a pendent flower-spike, at the very least eleven or twelve feet in length.

Another excursion was up the Roseau valley to the Mountain Lake, in the center of the island, some two thousand three hundred and fifty feet above the sea, and the source of the Roseau river. The scenery was grander, because the views were more extensive than on the preceding trip, and the vegetation above the altitude of two thousand feet also more luxuriant. I have never seen, elsewhere, such a rich growth of Orchids and other epiphytes and parasites—such variety and such profusion; a single tree would have many entirely different species upon it, besides being studded in places with the most delicate Ferns; even Tree Ferns were clothed from base to crown with Orchids, parasitic vines, &c.

Half or three-quarters of an hour's ride from Roseau is quite sufficient to take one up to a perceptibly cooler temperature, through beautiful scenery, and give one something of an idea of what luxuriant vegetation a hot, moist climate is capable of producing.

As there are no satisfactory photographs to be had of scenery in Dominica, I send you two views from the neighboring island of Martinique, which is very similar in its vegetation and mountainous character; one a view taken in the Botanical Garden at St. Pierre, the other a characteristic road scene.—J. F. FLAGG, *Dominica, Caribbee Islands.*

---

### SPRING BEAUTIES.

Sitting under a favorite Beech tree, with the soft airs of a balmy spring day blowing about me, I see a patch of plants numbering thousands, and making the ground a carpet of flowers. It is the Spring Beauty, one of those plants, which, through some accident, has received a common name which it well merits, and to which no one can dispute its title. Even the scientific name, *Claytonia*, has associations clustering around it, for it commemorates JOHN CLAYTON, one of the earliest of the many European botanists who collected in this country.

The tuber at the base of the stem is sometimes hidden just beneath the surface, but in grassy places is often deeply buried. From this tuber numerous slender, thread-like stems are sent out, spreading in many directions, each one with a pair of glossy, bright green, succulent leaves. Between these leaves rises the flower stem, with the delicate flowers ranged irregularly along it, on slender, drooping pedicels.

The flower is indeed a beauty. The two outer green leaves enclose the seed-vessel until it becomes ripe and ready to



open and shed its seeds for new plants. Inside the green sepals are the pretty petals, forming the attractive part of the flower. They are five in number, of a light rose color, often streaked with veins of a deeper rose running from the tip to the base of the petal, and following the graceful curve of the margin, while at the base is a little spot of yellow.

Now, why is it that in some flowers there are pure masses of color, as in the

it away, that those plants which could attract the most insects had the best chance to live; and that those which showed the largest flower would naturally catch the eyes of the greatest number of insects. So it at last happened that some of the stamens gradually grew larger at the base, while the anther grew smaller, until at last, after many generations, it was entirely lost, and the petal was evolved. What then?



CLAYTONIA VIRGINICA—NATURAL SIZE.

deep blue of the Harebell, or the Larkspur, the red of the wild Rose, and the white of the Lily of the Valley? While in others the petals are striped or dotted with yellow, red or brown, or with such mixed colors as in the Tiger Lily? Why is this so? Let us see.

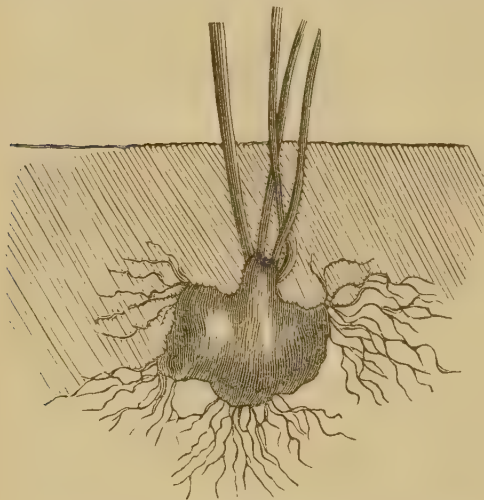
The theory of GÆTHE, that all the parts of flowers are merely modified leaves, leaves which have become metamorphosed into sepals, petals, stamens and pistils, is the one most commonly accepted. It is clear that leaves and flowers must have been co-existent. The primitive flower probably consisted of stamens which produced the pollen, and an ovary which produced the seeds. Taking this as a foundation, Mr. GRANT ALLEN has propounded the doctrine that petals have been developed from stamens. It is supposed that in the course of time, when insects first began to visit flowers to feed on the pollen or to carry

These petals were at first yellow, because the stamens in nearly all plants being yellow, the petals proceeding from them would be of the same hue. But in the lapse of time some of the yellow flowers found that their visitors were attracted by lighter shades of color, so they gradually turned white, and those plants which produced the largest and whitest petals attracted the most insects and perfected the most seeds. Then, perhaps, the outer rim assumed a pinkish cast, gradually becoming a deeper color, until the whole surface was of a deep rose tint. If this theory of the gradual evolution of the color of flowers is a true one, then we ought to find in the various stages of development of color in reddish flowers some signs of the change, some remnants of the white and yellow. Let us examine the little Spring Beauty now, and see what story it has to tell.

We find that the petals are, as a rule,



nearly white. That in a large patch of flowers some are pure white, some of a faint rose color, some of a deeper tint, and many have lines of a beautiful pink running lengthwise of the petal. Examining it still closer it is found that at the very base of the petal, almost hidden by the stamens, there is a little dot of bright yellow. Here then, perhaps, we may consider that the little flower shows the



TUBER AND ROOTLETS OF CLAYTONIA VIRGINICA.

stages of change in color from the original yellow to the color it now boasts.

But why are the petals only veined with red? Why are they not wholly of that color, instead of being merely tinted and striped? This can be explained in another way. When the flower first opens and expands its petals to the sunshine, the five stamens are clustered closely about the central column, the pistil. In a little while the anthers open and discharge their pollen. A small bee flying from flower to flower in search of pollen or honey, alights on the flower and dusts his legs and under part of the body with the yellow pollen dust. Off he flies to another flower. In this he finds a different condition of affairs from what he saw in the first. It is a little older, say only a day; but that day has wrought

a great change. When the flower had closed its petals the night before and hung down in sleep, the stamens were still surrounding the pistil in the center. But when, the next morning, they had opened again, the stamens could not rise. They were bent down and back, and the empty anther cells were pressed down against the petals. Then the pistil beginning to grow spread out its top into three parts, and this was what the bee found in this second blossom. So, walking in his impetuous way over the top of the pistil, he brushes off some of the yellow dust, and probing the flower to the bottom carries off the nectar he finds there and takes his way to another plant. Thus he has carried the pollen from one flower to another, performing the functions of a "common carrier," and transporting the surplus product of one place to another where it can do the most good.

Now, the lines of pink on these petals are there to tell each visitor just where he must look to find the honey he is seeking. A bee flying through the air is attracted by a patch of color, and flying to it finds a cluster of flowers. Insects are always in a hurry and take the shortest way to the honey. If one of them finds a white flower he is compelled to look a little for his food, and so wastes some of his precious time; but if, on the contrary, he is guided immediately to the store of sweets, he rifles it and flies away. These bright-colored lines end in the nectary, or place where the honey is deposited, and when the bee knows that, and it does not take him long to find it out, he does not hesitate, but proceeds at once to his business and gets through with it. So that in proportion as the lines are developed do the number of insect visits increase; and in proportion as these increase so does the number of seeds. Hence, the flower having these guides best developed is most frequently visited, and sets the most seed.—J. F. JAMES.





## FOREIGN NOTES.

### CLEANING PLANTS.

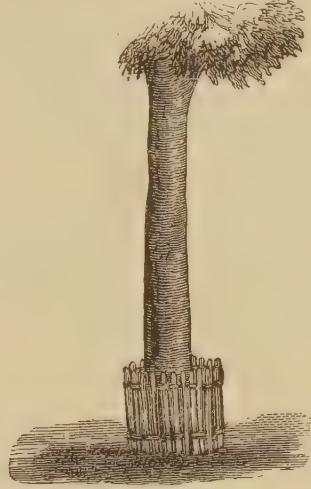
A writer in *The Garden* says he has used petroleum for this purpose with satisfactory results. "It is cheap and effective, not only for cleaning plants, but also for cleaning the interior of hot-houses, where it can be used at will. In the case of plants, it is more difficult to recommend the exact quantity to be used, as much depends on the character and condition of the plant when subjected to the operation, for instance, a market gardener in our neighborhood having a large plant of *Stephanotis* covered with brown scale, gave it, last autumn, a good syringing all over every other night, three times, using a quart of petroleum to three gallons of water, instead of four gallons of water, as recommended; the result was, every leaf dropped off. He was, therefore, about to consign it to the rubbish heap as useless, but I prevailed on him to give it a chance. As the season advanced the strong shoots began to break, the weak ones died off and were removed, and at the present time the trusses are so close together, all over the plant, as to form one sheet of pure white bloom. The foliage, too, is vigorous, and as clean as it possibly can be."

This experience is valuable, as showing how much petroleum a plant like the one named can stand, but the better way to use the substance for the destruction of insects is as an emulsion, as frequently noticed in our pages. For the purpose of painting over the woodwork of the inside of a hot-house, greenhouse, or any plant structure, petroleum is excellent, as it will effectually destroy all insects.

### PROTECTION AGAINST RABBITS.

The *Revue Horticole* describes a simple method which has been employed to guard trees against rabbits in places where they are numerous. Willow switches about half an inch in diameter, or a little less, are cut into lengths of two to two and a half feet, and laid side by side are fastened together by weaving small willows in and out near each end, or in the same manner fastening them

together by means of fine wire. This fabric, in the form of a tree-guard is set around the base of the tree. If three or four of the sticks are left longer than the



TREE GUARD OF WILLOW STICKS.

others, and project beyond them at the base, they can be pushed into the soil to hold the guard in place. The bark of the Willow is bitter, and the rabbits will not attack it, and they cannot reach the tree beyond this barrier. These Willow guards would also be equally efficient in protecting orchard trees from mice, which are so destructive in many places in winter, working under deep snows.

### NEW PLANTS.

Among other new plants receiving certificates of merit at the meeting of the Royal Horticultural Society, in May, we notice the following:

*Heliotrope Roi des Noirs*.—The deepest colored variety yet seen, its dense clusters of flowers being of a deep, almost black-purple. A compact grower and very free flowerer.

*Dodecatheon splendidum*.—The finest of all the North American Cowslips. It is not, however, so large in growth as the common *D. Meadia*, the whole plant being only about a foot high. The flowers, which are borne in umbels, are deep carmine-crimson, and highly attractive. It is a first-rate border flower, very hardy and of easy culture. Although it



is not so stated, we suppose this must be a variety originating in cultivation in England from *D. Meadia*, or from one of its natural varieties.

*Hydrangea Mandschurica*.—Like the common *H. Hortensia*, but with immense heads of flowers of a rosy-pink color, suffused with purple, and borne on stems some two feet high. A fine addition to the greenhouse.

*Lobelia superba*.—A bedding variety, remarkable more for its very fine deep blue color than for dwarf, compact growth. The color is probably unsurpassed among the multitude of *Lobelias* now grown.

*Lilac Marie Le Grange*.—A white variety, having massive trusses of flowers about twice the ordinary size. It is a first-rate addition to the already long list of *Lilacs* now in cultivation.

*Clematis Sir Joseph Hooker*.—A double flowered variety, having large, globose, rosette-like blooms of a deep purple, borne profusely on small plants.

Among other noteworthy plants submitted to the committee were *Yucca filamentosa variegata*, with a tall flower bearing numerous large white flowers. *Pteris serrulata fastigiata*, a handsome crested variety. *Pteris cretica albo-lineata alcornu*, a handsome form of *P. cretica*. It will prove a useful decorative Fern. *Philadelphus microphyllus*, a neat little Mock Orange, with the leaves and white flowers sweetly scented, like ripe Quinces.

#### TREE TOMBS.

That excellent and useful English periodical, *Forestry*, in some interesting remarks on the Baobab, or Monkey Bread tree, *Adansonia digitata*, says that "On the Western coast of Africa this tree is very liable to be attacked by fungi, which prey upon its heart-wood, and without changing its color or general

appearance, destroy the life of the plant, and render its timber very soft. Trees thus destroyed are hollowed out as *mausolea*, or burial places, to receive the dead bodies of physicians and magicians, and such other persons who, from their skill, are presumed by the superstitious natives to hold communion with evil spirits, and are therefore denied the common rites of sepulture. The bodies suspended in these chambers become dry and are well preserved, like mummies, and are called, in the language of the country, *guirots*."

#### ROSES ALIKE.

The following named varieties of Roses, as they are grouped, have been decided by the British National Rose Society to be identical in bloom:

Charles Lefebvre, Marguerite Brassac, Paul Jamain.

Exposition de Brie, Ferdinand de Lesseps, Maurice Bernardin, Sir Garnet Wolseley.

La Rosière, Prince Camille de Rohan.

Comtesse de Choiseul, Marie Rady.

Chromatella, Cloth of Gold.

Devoniensis, Climbing Devoniensis.

Baron de Bonstetten, Monsieur Boncenne.

Avocat Duvivier, Maréchal Vaillant.

Eugénie Verdier, Marie Finger.

Duchesse de Caylus, Penelope Mayo.

Adam, President.

Alba rosea, Josephine Malton, Madame Bravy, Madame de Sertot.

#### PRUNUS PISSARDI.

This handsome, purple-leaved Plum is recommended by the *Revue Horticole* for forcing in pots, in the same manner as *Spiræas*, *Deutzias*, &c. The plant is a great bloomer, covering itself with its light rosy flowers; at the time that these expand the leaves begin to push, and the contrast of tints thus supplied has a most pleasing effect.





## PLEASANT GOSSIP.

### THE GARDEN FRIENDS.

One autumn day, when skies were gray,  
The gardener came to take away,  
And give a corner of its own,  
A Phlox, that had with Roses grown,  
And which had found among its roots,  
In June, some green and tender shoots  
That soon the sweetest flowers bore  
That ever bush in garden wore.  
And every week thereafter grew,  
Until the Phlox had blossomed, too,  
Roses as lovely and as shy,  
Half hidden from the passer-by.  
"Ah!" said the bush, that autumn eve,  
"When you are gone how I shall grieve.  
In summer days for me you've made,  
From burning sun, a pleasant shade.  
And in the winter time, thought I,  
Still care and shelter will be nigh;  
I love you more than I can tell,  
How can I bear to say, farewell?"

"Dear Rose," the stately Phlox replied,  
"We must not part, whate'er betide;  
Such gratitude as yours, that brings  
An offering of the sweetest things  
Before one's own fair blossoms grow,  
I ne'er should find again, I know.  
Cling closely, dear, and you shall be  
Borne to my new abode with me."

The Rose obeyed, and hidden quite,  
Haply escaped the gardener's sight,  
And when, again, 'twas fragrant June,  
And all the song-birds were in tune,  
Peeping from out the Phlox's green  
Its lovely crimson blooms were seen.

—MARGARET EYTINGE.

### INSECT POWDER PLANT.

Will you be kind enough to give me some information with respect to the *Pyrethrum* from which the insect powder is manufactured? Which is the proper species of the plant for the insecticide, and under what conditions of soil and climate does its cultivation give the best results?—G. D. S., *Toronto, Ontario*.

The species of *Pyrethrum* from which the best insect powder is produced are *P. roseum* and *P. cinerariæfolium*: They are biennial plants. According to the reports made to the government from all parts of the country the plants will grow and endure the winter from the Gulf of Mexico to Canada, from the Atlantic to the Pacific. The botanist of the Department of Agriculture says, that "both species proved to be hardy throughout the greater portion of our country." G. D. S. can consult ALFRED HENRY

MOORE, of his own city, for results of his experiments with *P. roseum*, also, WILLIAM SAUNDERS, of London, Ontario. Good garden soil and clean cultivation will ensure a healthy growth of plants. It is well to sow the seed, and raise the plants to a sufficient size for transplanting, in a cold-frame. A mulching in the fall is desirable to prevent the plants from being thrown out of the ground by frost. The blooming will take place in the spring of the second year, and the flowers are to be gathered and dried in the shade, and under cover. The powder is the pulverized flower-heads after drying.

### AGAPANTHUS—BEGONIA—ANTS.

I would like to ask how to treat the *Agapanthus* after blooming, and also if it injures a *Rex Begonia* to cut off the leaves before the stem shows decay?

I see in the July number that C. B., Deadwood, Dakota, is troubled with ants on *Pæonies*. I had the same trouble until last year, when I used Persian insect powder very freely on the plants from the time of their starting in the spring, and am amply repaid by the beautiful *Pæonies*, especially the *Rose* variety.—MRS. M. M. I.

The *Agapanthus* should be supplied with water until it shows by its yellowish foliage that growth has ceased, and then be gradually dried off, allowing the bud to ripen. If the pot is full of roots it is best to shift the plant this month into a pot of larger size, but without disturbing the roots. The plant can be wintered in a light, dry cellar, or in any light place that is secure from frost. A very little water should be given occasionally to prevent the soil from becoming quite dry. About the first of March the plant can again be started to grow.

An injured or decaying leaf of *Begonia* can be removed without injury to the plant.

### EDGING PINKS.

Are the Pinks which Mrs. C. G. F. mentions, on page 179 of the *MAGAZINE*, as an edging for flower beds, identical with China or Japan Pinks, or are they another kind? If so, please give the name of them.—G. G. S., *Philadelphia, Pa.*

The kind of Pinks referred to are what



are known among florists as Double Garden Pinks, and there are several varieties of them. A good white variety is known as *Alba fimbriata*.

#### A TREE-CLASPING IVY.

I have a very vigorous English Ivy growing over a fine Sycamore tree. I value the tree very highly, and fear the Ivy will kill it. It is the opinion of some that it will. Would you advise me to kill the vine? The tree is still vigorous, showing no signs of injury so far. Please answer in next number of *MAGAZINE*.—G. B. F., *Memphis, Tenn.*

It is a very general opinion in England, where the Ivy is far more common than in this country, that when allowed to grow upon a tree it will in time so impede the growth of the tree as to stunt it, and eventually will quite cover it, to the exclusion of light and air, and thus, in time—probably a long time—compass the tree's death. This opinion appears to be well sustained by facts. Assuming then the bad effects of the presence of the Ivy, it becomes a question of taste whether to destroy the climber and save the tree, or to allow both to grow, the tree as support for the Ivy. The Ivy-clad tree is undoubtedly a beautiful object, and many would hesitate long, or refuse altogether, to destroy the Ivy, preferring to allow nature to take its course without interference. On the contrary, others would choose to save the tree. The proper decision will depend partly upon the number and location of other trees on the grounds.

#### FUCHSIAS—LANTANA.

My Fuchsias failed to bloom during the past winter; they were plunged in sand out of doors through the summer, not allowed to bloom, and repotted before removing to the house for winter.

The Lantana blossoms in winter, but often the flower buds turn black and fall. Why is this? Does the plant require to be kept in partial shade and cool temperature?—AUNT LUCY, *Sycamore, Ill.*

The Fuchsia blooms on the new shoots of the season's growth. The buds were removed during the summer, and no more could form until the completion of a new growth. At the close of summer the plants rested for a time, and then made their growth again at the end of winter or in the spring, when they probably bloomed. With the exception of a few varieties, Fuchsias bloom in summer, unless they have special treatment and forcing.

The Lantana, if desired for winter-

blooming, should be allowed to rest, nearly dry, from November to the latter part of January; then, having it potted in soil of equal parts of loam and leaf-mold and a little sand, it can be given a temperature of 60° to 65°, and only water enough to supply its demands. The cause of the flower buds turning black and falling off was owing, undoubtedly, to over watering.

#### HYDRANGEA—LAMARQUE ROSE.

I have a Hydrangea that has one branch with leaves that are green and white; it is very pretty, it is a bud sport. Do you think it best to cut it away from the rest?

I have a Lamarque Rose in one of my greenhouses, and it is one mass of beautiful bloom. I think there is nothing so lovely as its pure white, wax-looking buds. It is the admiration of all who see it.—Mrs. W. J., *Sarnia, Ont.*

The sporting branch of Hydrangea can be left on or cut away, as one may choose. It will do no harm to the plant if left on. Cuttings can be taken from it, if desired, and propagated.

#### EASTER LILIES.

I have received Easter Lilies from Bermuda; can you inform me, in your *MAGAZINE*, how to treat them through the summer, and what time in autumn to plant?—A SUBSCRIBER, *St. John, New Brunswick.*

Pot the bulbs at once if winter-blooming is desired. If intended for the garden plant them now where they are to remain.

#### FLORAL GOSSIP.

Why, oh why, will Fuchsia growers persist in the attempt to make such varieties as have a natural inclination to droop, assume a straight up-and-down appearance, which but few varieties of this plant ever have, if left to themselves? Some people call it training them; I call it torturing them. I am led to make this plea for the plant to be left more to its own management, from seeing the "training" a friend is giving a "*speciosa*." Each branch is tied to a trellis, with its tip straight up in the air, though as fast as it makes new growth above the string that holds it in place, it tries to droop. The whole appearance of the plant is unnatural. Left to follow out its own inclinations, it would assume a most graceful shape. Some varieties, like the Rose of Castile, are quite shrub-like, erect growers, but such kinds require no support, except a central one. In training



Fuchsias on trellises the branches should be allowed to droop after the trellis is covered, if you would give them a chance to display themselves to the best effect. I have a Mrs. Marshall which was pinched back when about six inches tall. Eight branches started, and these were tied down over the edge of the pot as soon as they were large enough. The tying was done to prevent their being broken when young and tender, not to force them to grow down. These branches are now about four feet long, well furnished with side branches, and the effect is charming as each branch is loaded with flowers. The plant occupies a position on a high bracket, and receives more admiration from visitors than anything else in my collection. I have a Covent Garden White which stands over eight feet high. It has out-grown its first trellis, and two others have been attached to the top of the first one, spreading out in fan-shape. These trellises are completely covered with branches, which curve gracefully in all directions. It is like a fountain of foliage and flowers. In October or November of each year, after it has done blooming, I cut its branches back at least two-thirds their length, and let the plant rest as long as it seems inclined to. In February it begins to grow, and by the last of March buds generally appear. All summer long it will be covered with flowers. Don't talk young Fuchsias to me. To get the best results from these charming plants, I want two and three year old ones. By cutting them in well, you can always induce a vigorous new growth, and secure a grand show of bloom.

I have a fine specimen of *Bougainvillea spectabilis*. It has made a surprising growth during the last few months, but it has never bloomed. Can any one tell me about the treatment it requires to insure blooming? Perhaps, like the *Hoya*, it wants age, and will bloom when it gets ready. The plant is now about two years old.

My little conservatory is "up stairs," therefore I could have no open "borders" in it. But having some plants which had out-grown large pots, I had a box made for them, last fall. This box is about ten feet long, two feet wide and nearly the same in depth. In this I planted some of my largest plants, and for all I can see

to the contrary, they grow as vigorously as if set in the open ground. An English Ivy occupies one end; it is growing very rapidly. Some of its branches have extended themselves over five feet in the last six months. A *Heliotrope* has made a great bush of itself and is covered with flowers at the present time. The large *Fuchsia*, of which I have spoken above, stands in this box, occupying the "place of honor." Of course, such a box cannot be moved, but as it stands against the wall, facing the glass, it is not necessary to shift it about, as only one side of the plants is seen. Where boxes can be placed in a similar position, I think they are far more satisfactory than pots, because in the same amount of space the pots would occupy you can give your plants several times as much soil to grow in as the pots would hold. This box does not allow the soil to dry out as it will in pots, and therefore less frequent watering is required.—\*.

#### THIS AND THAT.

The black Pansy is the flower for wearing in Lenten seasons or in mourning. Next to this is the dark Russian Violet.

Dark English Wallflowers in pots sold at fifty cents each, with Boston growers, in April. Growers find their best profits on such unexpected novelties as these. Forced Laburnum, with its lovely golden tassels, was a choice spring offering. Later, the demand for large, half blown Roses, to fill tall Oriental vases, for which a sheaf of *Jacqueminots* and *Marechal Niels* are cut, with stems a yard long, costing accordingly.

A New York firm sold over one hundred thousand *Chrysanthemum* plants last year. No wonder people talk about eating the buds pickled, as the Japanese do.

The remedy for *Phylloxera*, discovered in San Francisco, is finely divided quicksilver mixed with an equal weight of pulverized clay mixed in the soil with each vine. Very like giving the insect a dose of blue pill.

Yankee thrift will soon cease to be a proverb, and must take off its hat to Western saving. If a thing is absolutely worthless for other purposes, Chicago people press it into blocks and sell it as useful. Sawdust, shavings and other waste of saw-mills, fully one-third the lumber yield, and a dangerous source of



fires, is pressed into solid blocks by a steam power, and sold by the ton for fuel. Manufacturers prefer it to coal, being without smoke or cinders, and it sells at \$3.25 a ton. The whole cost of working is seventy cents a ton delivered on the cars. Even straw and cotton seed hulls, by this process, make excellent house fuel.

A health society, in London, find by experiment that currents of air in a room have direction and angles definite as those of billiards. An illness of the Duchess of Connaught was caught on a sofa exposed to a draft of foul air from the basement which would not reach her bed. Speaking tubes, pipes and hoists, all are conductors of dangerous air from the lower regions of a house.

Experiments prove that flowers are susceptible to poisons. Strychnine given to a Narcissus drew the petals up as if convulsed and left them dry and brittle; quinine made the petals limp and rotten; morphine left them flaccid as the silken leaves of the Poppy, and tobacco killed the whole plant.

Glass shingles for roofing are reported more durable and cheaper than slate. They are opaque or clear, as desired, are riveted on, and one hundred and fifty cover a square of one hundred feet, which would take three hundred slate. What sunshiny houses glass roofing would make, and how useful for green-houses, too.

How long the decorative purposes of salt boxes and butter boxes will escape the girl artist depends on whether she reads this paragraph or not. But to any appreciative eye, the smooth, hard wood surface properly sand-papered, offers a missionary field for sepia and colors in oil. A bath of hot soda is desirable as the first step for the boxes, and a lining of quilted satin, with scented wadding, turns them into capital cuff and collar boxes or cushion stands.

When Shaker chairs for the piazza darken hopelessly from the pleasing tint of new wood, there are ways of making them still more presentable. Paint them silver color, and cover back and seat with plush, or Turkish toweling, bordered by embroidery. Else, cover the rounds and arms in dark plush, with gray toweling and ball fringe, matching the plush for the rest.—P.

### A FANCY FROM FONTANELLE.

"De memoires de Roses on n'a point vu mourir de Jardinier."

The Rose in the garden slipped her bud,  
And she laughed in the pride of her youthful blood,  
As she thought of the Gardener standing by—  
"He is old—so old! And he soon will die!"

The full Rose waxed in the warm June air,  
And she spread, and spread, till her heart lay bare;  
And she laughed once more as she heard his tread—  
"He is older now. He will soon be dead!"

But the breeze of the morning blew and found  
That the leaves of the blown Rose strewed the ground;  
And he came at noon, that Gardener old,  
And he raked them softly under the mould.

And I wove the thing to a random rhyme,  
For the Rose is Beauty, the Gardener Time.

—AUSTIN DOBSON, in *July Century*.

### GRAFTING APPLE TREES.

At the late meeting of the nurserymen at Chicago, a paper was read by N. H. ALBAUGH, of Ohio, on budding and grafting. In regard to propagating varieties of the Apple, he took a position strongly in favor of grafting upon the crown of the young stock, and making only one graft to a root. "By adopting crown grafting, almost all the advantages of budding upon single stocks are secured, and, in this way, part of the work can be done in the winter, and not all rushed into the hurry and bustle of summer. In crown grafting it is best to use good, first-class stocks, shortening the tap-root a little, leaving nine to ten inches of root, and use scions shorter than piece-root-grafting, say about three inches, and make the splice or union just at the crown or collar of the seedling. Plant the graft about one inch below the joint, leaving two inches of it above ground. Should any of the scions fail, the seedling will throw up a sucker, which can be budded the same fall, and thus have nearly a perfect stand."

When several grafts are made of one stock by grafting on pieces of the root, as is commonly done, only forty or fifty per cent. of the young trees live. "A good many grafts start, but make a very slight growth the first summer, and are kept down by their over-topping neighbors in the row, and eventually go upon the brush pile." On the other hand, crown grafted stocks will give, under good conditions, from ninety to ninety-five per cent. of salable trees. These views were confirmed by other members. Piece-root-grafting should be abandoned.



## GERANIUM NOTES.

One reason why many people get discouraged who attempt to cultivate flowers is because they select the wrong kind of plants for these experiments, and failure is the result. In horticulture, as in everything else, we must begin at the "foot of the ladder," and the first step to be taken is the choosing of such varieties as are best adapted to the position they are to occupy, and very simple in their requirements. For the beginner, who has even a little sunshine, the Geranium is one of the best of house plants, being very satisfactory under good treatment, and even with bad management still struggles to put forth its leaves and flowers, reminding me of the Pauline definition of charity, "Suffereth long and is kind"—"beareth all things"—"endureth all things." There is, however, a choice even in Geraniums for house culture, some being far better adapted to the garden than the house, while some varieties which are perfect marvels of beauty under glass are almost worthless in the open air. I have found, to my disgust, that my old friend, the peerless Alba perfecta, which has produced such a profusion of its snowy flowers in the house for years, when put out of doors develops the sneaking weakness of other white Geraniums for getting a pink tinge, which goes far to substantiate the assertion of CHARLES DUDLEY WARNER, that "if not original sin, at least total vegetable depravity" exists in the garden. After years of irreproachable behavior, no sooner does the plant get out from my constant supervision than all the latent meanness in it comes forth. Some way plants and people seem very much alike, and their value too often depends only on their surroundings. But, "*revenons a nos moutons.*"

The double Geraniums which are just tinged with a slight shade of pink are unsurpassed for the house, but once out into the demoralizing influences of the outer air they are a miserable failure, shrivelling up into wretched brown looking affairs, which are a disgrace to the garden. Nearly all the dark varieties will do well both in the house and garden, but the perfection of the light ones must be brought out under glass. On taking up some of the catalogues which abound in this day of florists and flowers,

one might well be dismayed by the formidable lists of Geraniums contained in them. In spite, however, of wonderfully varied descriptions, most of the Geraniums which are widely different in form and color, can be enumerated in a comparatively short time; at least, enough to satisfy the demands of any reasonable amateur. Mrs. Moore, Mrs. Windsor and John Salter, the latter an indefatigable bloomer, with a medium-sized flower and compact truss, are very good samples of the light single Geraniums for house culture, and Mrs. Haskell and Mary Hallock Foote are excellent exponents of the salmon kind. Jealousy and Illustre Citoyen are fine specimens of the medium shades, the former having a yellowish shade and the latter a lilac eye, which in combination with the color of the rest of the flower gives it a very attractive appearance. Leviathan, William Cullen Bryant and Rev. Atkinson are very good representatives of the single scarlet class, having large individual blossoms. John Denny stands by itself the single Geranium *par excellence*, and should never be omitted from any collection. Mrs. E. G. Hill, a strong growing Geranium, and Mrs. Hayes, a light pink or flesh-colored double one, are two of the best that I have ever grown in the house. Victor Hugo and the old Asa Gray are free-bloomers of the medium shades in double Geraniums. Gilvie Lowagie, a light scarlet with salmon spots, is unsurpassed, having large individual flowers and being an exceedingly free-bloomer. Madame Thibaut and Mrs. Charles Pease are fine Geraniums of the shades of rose and pink, very free-bloomers, and have large flowers. Henry Cannel is a very satisfactory double scarlet, and Emily Laxton can hardly be surpassed in brilliancy of color; both are good bloomers. Bataclan and Charles Darwin are two of the finest dark shades, the latter being very like the John Denny in color. Depute Laflize and Depute Viox are also excellent for house culture, and those fond of magenta shades can find them well exemplified in Depute Varroy and Depute Ancelon.

With the foregoing list, or even with a smaller number, of Geraniums, one can have a display of flowers in the house at all seasons, and will find far more satisfaction in well grown plants of this



kind when brightened up with their numerous flowers than in many of the delicate and expensive plants which require more care and appliances than ordinary mortals can furnish.—H. R. L., *Hoosac*, N. Y.



EARLY CANADA STRAWBERRY.

#### AN EARLY STRAWBERRY.

The Early Canada was the earliest variety of Strawberry to ripen on our grounds the present season. It is of medium size, a good dark color, firm flesh, rather acid, but of good flavor, and of medium productiveness. We have formed a very favorable impression of this variety from its first fruiting season, and consider it promising as an early sort. Another year's trial will enable us better to give its comparative merits. Its qualities are those of a good market variety. It has been favorably mentioned by planters in different parts of the country, and will probably be better known.

#### THE BEST STRAWBERRIES.

It is yet early to have full reports of the various Strawberry tests, but for the information of those who may be intending to make new plantations, we can say that, as a rule, Wilson's Albany holds its

place as first for a market berry. In some localities the foliage rusts badly, and in such places it is no longer employed, but generally throughout a wide reach of country it is yet the leading variety. Next to this may be mentioned the Crescent, and then the Charles Downing, the Manchester and the Sharpless, and for a near market the Cumberland. Of new varieties, the Jewell is highly spoken of, and will probably prove an excellent and profitable market variety. The Parry, the Atlantic, the Henderson, and the Garretson are all acquiring high reputations. As to the James Vick, the same contradictory statements concerning it continue to be made this season as last. Generally it is being discarded, as the berries are too small, but occasionally, and especially on rich, strong soils, it yields most abundantly of medium-sized berries that command a good price in market. With us it has borne well, and we think with hill culture, or in narrow rows, it will, on many

soils, prove a productive and profitable variety. For family use there is nothing that surpasses in quality the old Triomphe de Gand, and it is satisfactorily productive. The Cumberland occupies a prominent place as a family fruit and is well worthy of attention. The Charles Downing is another favorite of the garden, as is also Golden Defiance. We advise those who raise Strawberries for their own use to give more attention to the quality of fruit than to productiveness; few varieties that are introduced are much lacking in this particular, but there is a wide difference in their quality.



## PATCHOULI.

The following account of a plant that furnishes a celebrated perfume is taken from a work elsewhere noticed, entitled, *Cultural Industries for Queensland*. Many of our readers will perceive from the engraving that the Patchouli plant is a member of the Labiate family. It is "a small perennial, shrubby, but insignificant looking herb, of no interest whatever in the garden; a native of Silhet, Penang, and the Malayan peninsula. It has broadly egg-shaped stalked leaves



POGOSTEMON PATCHOULI.

from three to four inches long, with the edges slightly lobed and round-toothed. The small whitish flowers tinged with purple are formed in dense spikes at the ends of the branches and at the axils of the leaves. The leaves are covered, especially on their under surface, with a soft, pallid pu-

bescence, which gives the plant a greyish appearance.

"The plant, which is called in India 'Puchá pát,' yields, by the distillation of its leaves and young tops, about two per cent. of a volatile oil of a yellowish-green color, from which the essence of Patchouli is prepared. The peculiarly strong and persistent perfume, while disagreeable to some people, is highly prized in Europe, and in India is one of the commonest essences in the bazaars.

"The introduction of Patchouli into Europe is accounted for in the following manner: A few years ago, real Indian shawls bore an extravagant price, and purchasers distinguished them by their odor—in fact, they were perfumed with Patchouli. The French manufacturers had for some time successfully imitated the Indian fabric, but could not impart the odor. At length they discovered the secret, and began to import this plant to perfume articles of their make, and thus

palm off homespun shawls as real Indian ones. From this origin the perfumers have brought Patchouli into use.

"The wild plant is collected and dried in the sun. Care is taken that the process of drying is not carried too far, or the leaves become brittle and crumble to dust in packing. The dried tops, technically known as *summitates patchouli*, are imported into England in boxes of one hundred and ten pounds each, and half-boxes. The dried article is said to smell more strongly in dry than in damp places.

"In the simple dried form Patchouli is also used to fill *sachets*, and is put in muslin bags with clothing to keep away moths and other destructive vermin. The leaf is also used in India as an ingredient in tobacco for smoking. Upon a larger scale the wealthier natives use the plant for stuffing mattresses and pillows, on the supposition that it is very efficacious in preventing contagion and prolonging life.

"The excessive use of the perfume, however, may be attended with ill effects. A French writer, in the *Annuaire de Thérapeutique*, cites the case of a young lady who was seized with a passion for Patchouli. Her linen, dresses and furniture were saturated with it. In a short time she lost her appetite and sleep. Her complexion got pale, and she became subject to nervous attacks. In this connection Pereira adverts to the singular sensitiveness of some constitutions, the hysterical chiefly, to perfumes. In women especially, headache and innumerable other nervous affections are readily produced by the agreeable odors of flowers and other perfumes; cases even of poisoning are supposed to have occurred from inhaling the emanations from odoriferous plants."

---

HARDY CATALPA.—This tree, which has been extensively planted for a few years past on the western prairies as a forest tree, has suffered severely in some places from the severity of the last winter. ROBERT DOUGLASS, the well known nurseryman, does not advise the planting of it north of the 41st parallel of latitude.

---

AILANTHUS LEAVES POISONOUS.—Ducks have been poisoned by eating the leaves of the Ailanthus. Death follows in a few hours after feeding on them.

## WHAT IS IT?

Since my attention has been called to rockeries and things, I have been inquiring into and observing the compound of a great many curious heaps in door-yards here and there. In the city of P. I know of one pile which goes by the name of "our rockery," which is composed of, or at least covered with, stones, from about eight inches in diameter down to coarse gravel, all, especially the latter, selected for beauty of color, and the broken dishes accumulated and preserved for the last thirty or forty years. Right at the very top is a noseless pitcher, of coarse brown ware, and in it a German Ivy supported by sticks three feet high. At one side is a sugar bowl of pale blue and white ware, in it a Geranium, balanced by a tea pot of the same age with another Geranium exactly like the first. These plants have two stems of bloom every year. Between these pots is a shaving mug containing an Achyrantes; behind the Ivy is a Fuchsia, only one stalk and tied to a stick. Some Kenilworth Ivy crops out here and there, also small clumps of Othonna, and, near the base, other bowls and pitchers holding Coleus and Geraniums, but all are kept from vigorous growth; that would hide the beauties of "our rockery."

"Why, here is a piece of the set of dishes I gave MARY ANN when she was married, and that was in '45. Its just about the best piece, too." "Here is a piece of dear old grandma's breakfast set, and she's been dead now these thirty years and more." And so on they go, describing to visitors the bits of "real china" and other lovely little things that must not be covered up, for everything is a memento and has a history, just like a "crazy quilt."

"Our rockery" belongs to a house of rather imposing appearance, situated on a corner lot where two busy streets cross. The worst of all is to hear others propose to go and do likewise, for, really and truly, some people think it very pretty. I do not see how they are to be educated out of such crude taste, unless by gift of a chromo for the most artistic work and for lack of display of poor taste. I add the last clause knowing that otherwise these things of their own fancy would come in side by side with the premium arrangement in many yards.

I will briefly describe a rockery built in my own yard, this summer, that appears to please all who see it. Early in the season we cleared a space that was encumbered with a thicket of Cherry stumps and sprouts, and also moved a pile of rough stones left after building a cellar wall. I ordered several of the stumps, large and small, to be piled up hap-hazard in a side yard, filled the spaces closely with soil of clay, leaf-mold, and manure, and stones, placed large stones obliquely here and there to hold up the soil, leaving exposed places irregularly everywhere. Then planted Ferns, Sedum, Othonna, Ivy, Nasturtium, Morning Glory, Auricula, Oxalis, Wild Strawberry, Saxifrage, &c., and everything flourishes. In fact, I am obliged to cut back some things to give others room. The Cherry stumps being alive, and not even sleeping, began to sprout as soon as nourished, and they continue giving me an immense amount of labor and vexation cutting and peeling them down, but in course of time, by constant watchfulness, all will be subdued. After all, what shall I call this pile, a rockery or stumpery, what? It is pretty, and no one will say otherwise. But what is it?—R. A. H., *Smithville, Ill.*

## HEATING GREENHOUSES.

Heating greenhouses with steam has been on trial for several years, but the merits of the method have been variously estimated, so as to leave some doubt in the public mind whether it, or by the more common method of the use of hot water, was the better way. At the late meeting of the American Association of Nurserymen, Mr. HUNT, of Illinois, stated his preference for the employment of steam, though his own place is fitted out "at a large expense" with hot water apparatus, and "it works well." In heating by steam, he says, experience has proved "that there is economy in construction, and a great economy in fuel." He gives facts and figures in two cases to support his position. In the first of these, where by some small changes nearly the same apparatus was employed for steam heating as had been previously used for hot water, the saving of fuel was thirty-three per cent. In the other, thirty-five per cent. was saved in construction, and thirty-three per cent. in fuel.



**GARDEN NOTES.**

English Turnips can be sowed in the early part of this month at the North, and later at the South. Spinach, Radish and Cress can be sowed for late use. Cuttings of many kinds of plants can be profitably made this month. Most soft-wooded plants, and cuttings of the young shoots, of *Spiræas*, *Deutzias*, *Weigelas*, &c., will root quickly at this season, even in the open ground, if shaded a little at first. The preparation of new ground for lawns should be completed this month, ready to sow the seed by the first of September, so as to have the benefit of the warm soil and the whole of the fall season; a fine stand of grass can thus be secured.

There is no better time than the present, when the garden is in its best condition, to be on the lookout for improvements that can be made, to plan them and make a note of them, so that they can be taken in hand when the opportunity offers.

We have noted with pleasure that old plants of *Clematis coccinea* are blooming very freely this summer, and it is now certain that this plant will stand through our severest winters. It is very pleasing when in full bloom. *Rosa rugosa* wintered perfectly, and is blooming profusely this summer, almost without rest. *Yucca gloriosa* in full bloom at midsummer is a striking and handsome lawn plant.

**THE STURDY OAK.**

The different varieties of Oaks in this country appear to have a destiny before them in supplying us with timber. ROBERT DOUGLASS, the well known nurseryman, says that they are driving out other trees where they have an even chance. "They are creeping out into the prairies and covering unoccupied grounds in the west wherever it is not too wet or too sandy for them to grow. Thousands of acres are now covered with young Oaks

where they did not grow forty years ago." Their superior advantage in holding their position and advancing on new territory, he attributes to their tap-root. "Indeed," says the same authority, "it is the principal advantage which makes the progress of the Oak resistless, enabling it to hold every foot of ground it gains, and crowds its way by approaches slow, but so certainly triumphant in the end, that I believe it only needs a foothold in a continent with soil and climate suited to its growth to conquer and possess the whole." Although most other trees produce many times more seed than the Oak, and some of these are so formed as to favor their wide dispersion, yet, with these qualities in their favor, they cannot hold their own against the Oak when otherwise the chances are equal.

**MICROSCOPIC PENCIL CASE.**

In the form of a cylinder ruler, the inventor, Mr. A. B. LECKENBY, of this city, supplies a handsome pencil case of brass, about an inch in diameter and eight inches long, which is combined with a mounted lens, making a very serviceable microscope for the examination of many small objects, such as seeds, the parts of plants, the fibers of cloth, insects, &c. A prepared slide of a variety of seeds accompanies the instrument. This useful combination is primarily designed for the use of school children, affording them the means of preserving their pencils and pens, and of examining innumerable small objects, thus inviting and aiding them to a closer observation of nature as it is presented in its small structures. This useful article sells for thirty-five cents and will be furnished everywhere by the book trade. Parents and teachers will find it a valuable assistant for the children, and it will prove convenient on every writing desk.



# OUR YOUNG PEOPLE.

## THE BUSY BEE.

What lessons of industry the little bees teach as they busily flit from one sweet flower to another, gathering the honey and pollen on their way; and they are not selfish either, for their work is for others as well as themselves. These honey-bees are called the workers of the hive, for it is their business to attend to the wants of the queen-bee and the drones, and to take care of the little bees. They gather the food for all of these, and keep the house, as it were, swept and garnished. Then they make the wax for the honey-comb, excavate the wonderful little cells and fill them with clear, sweet honey. Therefore, with such numerous duties to attend to, it is not surprising that they are called "Busy Bees," and when one considers that a piece of comb fourteen inches long by seven inches wide, containing about one thousand cells can be constructed by the bees of one hive in twenty-four hours, it certainly proves that their title is well earned.

The cells in the combs are first used for breeding the insects, for in them the queen-bee lays the egg which is soon transformed to the larva state. The little creature then spins a white silken cocoon, in which it wraps itself until it becomes a perfect bee, and then makes its way from the cell to take its part in the busy throng.

The cell of a queen-bee is made somewhat differently from those of either the drones or the workers, for it is more spacious, and the food provided for its occupant differs from that intended for the common larva, as it is a translucent, jelly-like substance, while the others are given only the bee-bread, or partially digested pollen and honey.

If a hive is by accident or design left queenless, the bees for a time are thrown into a state of great consternation, and cease their work, seeming to hold consultation in order to decide what they shall do. They then begin working again most industriously that they may repair their loss in the following manner: Three

adjacent worker cells are formed into one, by cutting away the separating walls, and the occupants of two are destroyed. The common food is all removed, and the remaining larva provided with the food which the bees prepare for royalty. After a few days dwelling in the more spacious cell, a higher degree of temperature, and more dainty food, the common larva is most wonderfully transformed into a queen-bee, and royalty is once again at the head of the busy little community.

The senses of bees are very accute, and they are thus enabled to find the sweetest flowers. The Clover, for instance, is one of their favorites, and from the White Clover the sweetest and most delicate honey is said to be produced. The flowers of the Linden or Basswood also supply the best of honey, and the Sweet Mignonette is one of the most valuable honey plants.

The worker-bee is furnished with a honey-sac, wax-pocket and pollen-basket; its abdomen consists of six joints or rings, and under the four middle ones the wax-pocket, or organs for the secretion of wax is situated. A joint of the hind tarsi is so shaped as to form a pollen-basket, and the legs are provided with hairs which collect the pollen or flower dust. This the insect brushes into its pollen-basket. The bee is provided with a sort of flexible proboscis which it plunges into the flower, and thus laps up the honey, part of which enters the stomach, but the larger part into the honey-sac, and when the insect has gathered as much honey as it can carry, it makes a "bee-line" for home, and no matter how far distant the hive may be, the little creature swerves not from its course. When the hive is reached, the bee, by means of certain muscles provided for the purpose, presses the honey from the honey-sac back through its mouth and then into the cells of the comb.

When a swarm of bees is about to seek a new abode, the workers gorge





themselves with honey, and upon entering the home suspend themselves in festoons by hooking their claws together, and hang motionless from the top of the hive for many hours. In the meantime the digested honey becomes a peculiar oil, and collects in scales beneath the abdominal rings. One of the workers then with its claw draws a scale of wax from its body, and with the mouth works and crumbles it until it issues in a sort of soft, pliable ribbon. The other bees follow the example of their leader, and soon an arch of wax is built on the ceiling of the hive. In this the first foundation of cells is excavated, and others are afterwards built up around them.

The workers always remove from their home any particles that may mar its neatness, or if some intruding object should prove too large for them to dislodge, they at once completely and skilfully seal over the offending object with wax. Thus, if a difficulty cannot be overcome in one way they ingeniously resort to some other. They are models of neatness in their little homes, and use to the best advantage what may be called their talents in the way of ingenuity and skill. Therefore these little insects are objects of interest, not only because of the wonderful result of their work, but for their many good examples, which might well be followed.—M. E. WHITEMORE.

## STELLA RAY'S JOURNAL.

July 1. So many people are planning to go off for a rest from ordinary duties, or have already gone, that the social world seems filled with the idea of vacation. But not so in the world of nature; this is its busy, working-time. Everything is in the flush of fresh development, and will go on, and on, to the autumn fruition. If only I, myself, could go on, and on, in worthy development, how glad I should be. In my calendar for this month, I read:

"All we have willed or hoped or dreamed of good,  
shall exist;

Not its semblance, but itself; \* \* \* \*"

And again:

"There shall never be one lost good! \* \* \*"

All to be garnered up in the glorious future, I suppose. Even our failures, when good was aimed at, are to be counted as successes, the poet thinks. I am sure it is very comforting to believe this. How I wish every disappointed, weary-hearted body in the world could feel this. It is so encouraging and restful.

I often find myself, in thought, trying to follow grandpa Starr. I do so wonder where he is and how surrounded. His death is the first that ever came near to me, and the sharp, realizing sense of it compels thought. Two babies died between myself and Harvey, and I can only remember the waxen image of the second one as it lay in its coffin, not realizing, though I was told, that it was the same prattling child that had so delighted me in the nursery. But I know that mamma has a sort of "holy of holies" in her affections where the memory of those two is enshrined.

3. Last night, after Harvey was in bed, he called me, as often before, to ask questions about grandpa. From the matter-of-fact way in which those two children question me, one might suppose they were to be off for the unknown kingdom in a week or two, and must learn a great deal before starting.

I would like, myself, to have a long talk with Mr. Sheldon, but that is impossible. So, to-day, when papa was resting his aching hip on the lounge, I took a low seat beside him, and we had a long talk on subjects which puzzle me. To my queries he often said, "I don't know; I can well afford to wait," or, "I can trust."

Once he said, "It is idle to speculate about the future; there's more yet to be learned pertaining to this world than can be compassed in any one's lifetime." Again, he said, "I don't *want* to know it all in this life; I fancy that the glorious surprises in store for us will be one of the pleasures." Still again, "What if christians *do* 'believe more than is necessary' for their eternal peace? How can you *know* they do? Don't wreck your happiness there, my daughter. The beliefs of christians are at least harmless; *harmless*, remember that, and they are safe beliefs, entirely safe. Like old Samuel Johnson, I, for one, prefer to be on the safe side, and moreover, I believe that St. Paul was likely to know a great deal more about it all than anybody now-a-days, and am willing to pin my faith to his."

O, it was a precious talk! I wish my stingy little journal could hold every word of it. Papa didn't tell me that I must believe this and that, or be spiritually wrecked; but just showed me the common sense of certain beliefs after all the light that has been given us, and I feel better satisfied now than ever before. Of course, St. Paul knew; why shouldn't he?

And now for a change of subject, for O, my journal, to-morrow will be the "Fourth," and papa says we have all been housed up so long that Will is to take us to Glen Grove to spend the day; the place so called because a deep ravine bounds two sides of the grove.

I am glad Carrie Stone does not come till next week. I wonder if she still spells "Uclid" without an E.

5. Although this is Sunday evening, I must jot down a hint of yesterday's delights, for the coming week will be a busy one. We spent the day in one of "God's first temples." O, the lusciousness of breathing, feeling, seeing, amid such surroundings.

But to begin back: Mamma had said we must invite the Havens to go with us, they had been so kind and deeply sympathetic, and yet unobtrusive, in our late trouble, besides always looking to us for social sympathy—growing first out of their fondness for papa as a physician—that this sort of courtesy would be of all



things most satisfactory. And so it proved. It was of no use that mamma sent word that dinner would be provided for all, for Mr. Haven said, "We'll 'ave a few nick-nacks ourselves for 'Arvey an' Hefie to heat. Children's fond o' things that come haway from 'ome;" and the result was, that out of their great hamper came quantities of the most mouth-watering viands that were ever spread out under the sky for birds and squirrels and creeping things to peep at and crawl over.

Harvey had to have flags and fire crackers, like his town friends, and the hollow of a stump was his magazine, and its walls his flag-decorated battlements. Of course we all let him have the fun of scaring us to death a dozen times. Even papa, whom Sambo brought at noon, suffered the terror of an explosion underneath his high swinging hammock.

The sloping banks of the ravine are curtained with the very witchery of shy, growing things, emitting a freshness and fragrance to the cool whiffs of air escaping the passage, that is like nothing else in the world. Ah, I can almost catch a scent of it now, even by recalling the scene.

In ten minutes Miss Haven had found some wild Bergamot, and in ten more had a bunch of Pennyroyal. How she does revel in aromatic plants! I wonder if the instinct be not the counterpart of some charming mental quality. I must think about it. I brought home a lot of stuff, as I always do, to try to cultivate it, and I suppose it will die, as it always does, pining for its own shade and moisture and coolness. I have success with but one wild-wood thing, and that is "Jacob's Ladder." It is a joy to behold. If only I had space for details I could write for hours, but private journals must not be cumbersome.

As Sambo was hurrying off he turned to papa, and said: "I'll be back fo' yo', 'gin sunset, sah; that entiah crowd o' colo'ed gentlemen an' ladies is waitin' fo' me, 'foah they'll tetch a bite o' grub, or whoop a single round fo' Linkum and Gawge Washin'ton, D. C. Wish yo' a pleasant aftahnoon, doctah." And with a flourish off he drove. If Sambo's self-conceit did not so amuse papa, he would find it insufferable. After he was done laughing he explained to Mr. Haven that

the fellow had probably heard Washington *City*, D. C., spoken of, and had got things badly mixed.

7. This morning, mamma asked Will to help her re-arrange grandpa's room and to get his things quietly packed away before she leaves home for her expected trip. But he slipped off with papa on his rounds and sent in Sambo. Mamma was exceedingly tried, and sent Sambo to stay in the office. I offered my help instead, but mamma declined it, saying that Will should assist her after his return, and that she should take that opportunity to show him the weakness, the cowardice of trying to evade or ignore the unpleasant and trying phases of life as they occur. She thinks very likely he would not have come home during the recent trouble had he been sent for. The depression and dread of what was before him would doubtless have made him fancy he was half sick and too unwell to come.

10. Yesterday, mamma and Effie left us. We were all glad for her to have the change, but, O, what a vacancy her absence creates here. But I've something good to offset this, for, "O, be joyful," Carrie Stone writes she cannot come until August 1st, and then mamma will be at home to make everything easy. How I wish I could feel differently about her. Mamma has hinted that I may possibly be of great use to her, and here hangs my calendar, motto side out. Well, I'll leave it so for to-day, and see if I can stand it.

25. I had planned to have "vacation" in my journal-writing till mamma's return, but find a pressure bearing on me to-night that must make a part of my personal records. It's about Will and his affairs. Something he said to-day gave me one clue to the talk mamma had with him. He said to me by way of joke that she had hinted that she was afraid that his future wife would have a heavy time of it. I answered, sharply:

"And so she will, if you are going to shirk everything through life that harrows your feelings a little. I am sorry for her in advance. By the way, you never told me the name of that table-mate of yours."

Will actually blushed as he answered: "You never asked me; it is Helen Holmes." Such proof of feeling on his



part annoyed me greatly, though, of course, I did not choose to show, but indifferently inquired :

"Where does she live?"

"In Corpus Christi, Texas."

"Two thousand miles away!"

"Yes."

"What do you know about her?"

"Not much, only that she's a grand, good girl, and that her room-mate, from the same place, reports her an orphan and very wealthy."

"And she treated you indifferently, did she, after having consented to be your table-mate?"

"Rather so, I thought, until that flub-dub we boys had, when she showed a sudden interest in the form of a private lecture; after which she relapsed into her usual manner. I'd thought of trying another little splurge to see if she'd take me in hand again."

"O, yes, and so lose her respect altogether, as well as that of somebody else. You'd better be careful, Sir Wil-

liam, the less you 'splurge' the better."

Now, of course, I can't keep from thinking of all this, and am more nettled by it than I can explain to myself.

31. One more entry, just to close the month and to keep even with events.

Mamma returned yesterday, looking ten years younger instead of three weeks older. It is clear that mothers and housekeepers ought to be driven away from care sometimes, unless they are wise enough to plan some rest for themselves. Effie is rosy, and has a hundred things to tell all at once.

Harvey's home conduct was so praised that Effie could not wait for the long unclasping of mamma's arms about him, as he stood by her chair, but slipped up and whispered, loud enough for all to hear :

"Mamma's got the *bootifullest* present for you, and one for Stella; but don't you tell her."

Every day, Sundays excepted, while mamma was gone, I knit a stripe in Mable's shawl.

## AMONG THE PINES.

VII.

Along the principal rivers down which the Pine of the northern sections of Wisconsin and that part of Michigan lying between the former State and Lake Superior, is brought, booms have been established, managed by companies incorporated under the laws of the State. These booms are located in places where it is possible to store many hundreds of millions of feet of logs. Into these booms the logs belonging to many firms are run to await rafting. When they reach the boom, the respective owners of the logs in each drive are notified of their arrival. Honest and trusty men are sent on by each owner to superintend the sorting and rafting of the logs. Formerly there was a great deal of stealing done. The marks of the firm, or man, owning a log would be removed and these logs would be sold to unscrupulous buyers for small prices. It was quite easy to do this when each lumberman drove his own logs, for many would be left along the banks in the hurry of getting out of the way of drives following closely in the rear; they could be floated away from the stream and be hidden by land pirates until such a time as they deemed it safe to offer

them for sale. Owners of small saw-mills along the streams often stole the greater share of their stock from the drives going down river. When the owner's mark was removed, it was, of course, impossible for him to prove property. At present the system is such that there is but little chance for stealing, and the party taking contract for driving the logs is responsible for the safe delivery of the amount intrusted to his care.

At the "big boom," which holds the whole amount of logs brought down the river, smaller booms are constructed, from the boom sticks of which I have heretofore spoken. These are made by fastening them together, end to end, and stretching them across the river or down one side of it, with an opening into the enclosure thus formed from the main boom. All hands fall to work sorting the logs, and those of one mark are put into a boom belonging to the owner of that mark. As fast as possible they are rafted. This is done by hanging a dozen or more logs side by side. Across these, poles are laid and fastened by lock-downs, as in making the foundation of a wamakin; or four boom sticks are used,



fastened together at the corners, thus making a square, which is filled with logs. These rafts are floated down to the cities where the mills are in which they are to be sawed. Here they are stored in booms belonging to the various mill companies, until they are needed.

Most lumbermen have mills in which they cut up their own Pine, preferring to do this to selling the logs, and after giving it time to dry out, to ship it by railroad to different points for sale. Most large companies have lumber-yards established in Dacotah, Iowa, and other States where no lumber is produced. Very many of them have also manufactories connected with their mills, in which sash, doors, blinds and shingles are made. It is very interesting to go through one of these great mills and see the intelligent operation of the machinery employed. It seems to think; it is brains in iron and steel.

I know of no pleasanter trip for a city boy than one to the lumber regions. It will be amusing and instructive, and he will become familiar with a phase of life he can see nowhere else. The pinery boys are always glad to have visitors who come to learn, and are not afraid or ashamed to admit their ignorance. But if they come pretending to know all about everything, their ignorance will be sure

to be found out, and they must after that expect no mercy from the boys, who can be as tormenting as they can be agreeable, if they choose to. In the pinery all are "boys;" the man of fifty or sixty, whose hair is gray, is still a "boy."

In localities to which the various lines of railroads have penetrated in the lumber regions on their way to the vast copper and iron mines at the north, contiguous to Lake Superior, great mills have been built, and logs are drawn to them on trucks and over tram-roads. In this way, Pine which is not near any river is being used up. Each freight train from the north brings cars laden with lumber for Milwaukee, Chicago, St. Louis, and hundreds of other places at the south, the east and the west. Hundreds of carloads are shipped daily to the new settlements in the northwest. At the present rate of consumption it does not seem that the supply can continue long to meet the demand. But there are still vast sections of Pine at the north which have never been visited by the lumbermen, save in the way of prospecting, and land hunters, men who make a business of hunting up valuable tracts of Pine and selling them to firms and individuals, tell us that there is no reason for anticipating a lack of Pine for years to come. —EBEN E. REXFORD.



### EDITOR'S MISCELLANY.

#### RESTORED NIAGARA FALLS.

The formal opening to the public of the grounds surrounding Niagara Falls took place on the 15th of last month. A large number of people, estimated at fifty thousand, congregated there to witness the ceremonies. Governor HILL, as the representative of the people, accepted on behalf of the State the purchase of lands made by the Commissioners appointed for the purpose by the State legislature. The land at Niagara Falls which is now free to the

public through the action of the State consists of a strip from one hundred to several hundred feet in width in its different parts, and extending from a point above Goat Island to a point below the Whirlpool, and including the islands. The purchase of the land was made from the several parties having possession, at a cost of about one and a half million dollars. The whole place has been given the name of Prospect Park, and is to be cleared of all fences and unnecessary buildings, and planted in such a way



that in time it will present, as nearly as possible, the natural features of the landscape. Governor HILL concluded his speech with the following remarks:

"For such and kindred beneficent purposes New York cannot expend too much. We are abundantly compensated, and our State pride is gratified by whatever contributes to the glory, the grandeur and the adornment of our commonwealth. We do not forget that there is but one Niagara Falls in the whole world. Nature has given to no other State in our Union such a magnificent boon. As Niagara divides its waters between the Canadas and New York alone, so will New York and the Canadas equally divide together the honors of this grand enterprise, when it shall be fully perfected on the other shore, as originally contemplated.

"This project for the preservation of the beauties of the greatest wonder of nature is indeed a noble one. Its conception is worthy of the advanced thought, the grand liberality, and the true spirit of the nineteenth century."

#### NURSERYMEN IN COUNCIL.

The American Association of Nurserymen, Seedsmen and Florists held its annual session this year at Chicago, June 17th to 19th, inclusive. The President, EDGAR SANDERS, called the meeting to order, and made a pleasing opening address. The Hon. NORMAN J. COLEMAN, U. S. Commissioner of Agriculture, was present, and in response to repeated calls spoke briefly of the duties of his office, and expressed gratification in the fact that he had the sympathy and support of all horticulturists.

An essay by J. H. MILLER, of Ohio, was suggestive and encouraging. Among other points he touched upon was the support of horticultural societies. "I speak of my own State when I say that in traveling through any part of it, you can almost tell by observing the farms and home surroundings, whether a live horticultural society is in existence in that particular locality. The question as to the advantage of associated effort, or the benefit of friction of mind with mind, has been long since settled. Would you give your influence in favor of planting trees and flowers? Would you advance the cultivation of the beautiful about the home, the school-house, the church—in the village and in the city? You cannot better accomplish your purpose than by active co-operation through the medium of a live horticultural society. Village improvement associations, and all organizations for the cultivation of aesthetic taste in the external embellishments of home, the establishment of parks and gardens belong to the same class of educational influences, and ought to be encouraged. We should love to receive and impart instruction, and co-operate with workers in the cause of horticulture."

Many interesting subjects were discussed, and the pleasant and profitable session of the association was adjourned, after deciding to hold its next annual meeting in Washington, D. C.

#### STATUE OF DARWIN.

A marble statue of DARWIN was unveiled at the British Museum on the ninth of June. A presentation speech was made by Professor HUXLEY, as President of the Royal Society and member of the Darwin Memorial Committee. As the representative of the trustees of the Museum, the Prince of Wales was the direct recipient of the statue of the late philosopher. An account in the *Gardeners' Chronicle*, states that, "The naturalist is represented seated with the head slightly inclined to one side,

wrapped in thought, like that marvelous statue of MICHAEL ANGELO'S, in Florence. The pose is easy, the likeness good, so that the artist, Mr. BOEHM, may well be congratulated on his success. The statue has been erected with funds raised from all countries and all classes of people."

The following is an extract from Professor HUXLEY's address: "It is now three years since the announcement of the death of our famous countryman, CHARLES DARWIN, gave rise to a manifestation of public feeling, not only in these realms, but throughout the civilized world, which, if I mistake not, is without precedent in the modest annals of scientific biography. The causes of this deep and wide outburst of emotion are not far to seek. We had lost one of those rare ministers and interpreters of nature whose names mark epochs in the advance of natural knowledge. For, whatever be the ultimate verdict of posterity upon this or that opinion which Mr. DARWIN has propounded, whatever adumbrations or anticipations of his doctrines may be found in the writings of his predecessors, the broad fact remains that since the publication, and by reason of the publication, of the *Origin of Species*, the fundamental conceptions and the aims of the students of living nature have been completely changed. From that work has sprung a great renewal, a true *instauratio magna* of the zoological and botanical sciences."

In conclusion, the Professor said: "It only remains for me, your Royal Highness, Lords and Gentlemen, Trustees of the British Museum, in the name of the Darwin Memorial Committee, to request you to accept this statue of CHARLES DARWIN. We do not make this request for the mere sake of perpetuating a memory, for so long as men occupy themselves with the pursuit of truth, the name of DARWIN runs no more risk of oblivion than does that of COPERNICUS or that of HARVEY."

#### MUSHROOMS.

Valuable service has been rendered to the public by JULIUS PALMER, JR., of Boston, in the preparation of a set of chromo-lithographic plates illustrating some of the principal edible fungi of this country, and also the principal species of the larger poisonous fungi, and those that are suspicious and to be avoided. The set consists of twelve plates together with four pages of letter press, and also on each colored plate a description of the figures, and, in the case of those that are edible, directions for cooking. Twenty-eight species of Mushrooms, or fungi, are shown. The coloring is in imitation of nature, and as to its fidelity it is only necessary to mention that it is executed by L. PRANG & Co., of Boston, who are the publishers of the plates. The plates are issued in the form of two large charts to hang on the wall, and also in portfolio form. The publishers state that Mr. PALMER has for more than ten years directed his attention and his experiments unremittingly to ascertaining the edible or noxious qualities of the various species of Mushrooms abounding in our woods. If these charts receive a welcome from the public the publishers may be encouraged to furnish a supplement from time to time, until the illustrations shall comprise nearly or quite all the Mushrooms of America. The plates are furnished either in chart or portfolio at two dollars the set.

#### CULTURAL INDUSTRIES FOR QUEENSLAND.

A volume of over two hundred pages with this title is the work of LEWIS ADOLPHUS BERNAYS, F. L. S., F. R. G. S., and is dedicated to Sir JOSEPH D. HOOKER. It is a carefully written book.